

**Federal Operating Permit
Article 1**

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act and 9 VAC 5-80-50 through 9 VAC 5-80-300 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	City of Harrisonburg
Facility Name:	Resource Recovery Facility
Facility Location:	1630 Driver Drive Harrisonburg, VA 22801
Registration Number:	81016
Permit Number:	VRO81016

January 14, 2004
Effective Date

December 21, 2005
Administrative Amendment Date

January 14, 2009
Expiration Date

Director, Department of Environmental Quality

December 19, 2005
Signature Date

Table of Contents: 2 pages
Permit Conditions: 53 pages
Source Testing Report Format: 1 page.

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I. Facility Information

Permittee

City of Harrisonburg
345 South Main Street
Harrisonburg, VA 22801

Responsible Official

Roger Baker
City Manager

Facility

Resource Recovery Facility
1630 Driver Drive
Harrisonburg, VA 22801

Contact Person

Charles Honaker
Solid Waste Superintendent
(540) 434-5928

Plant Identification Number: 51-660-0118

Facility Description: SIC 4961 – Steam and Air-Conditioning Supply

The Resource Recovery Facility combusts municipal waste in two incinerators and natural gas/distillate oil in two boilers in order to supply steam and chilled water to the James Madison University (JMU) campus. Any steam that is produced in excess of JMU's needs is diverted to a turbine for electrical power generation, and then sold to the Harrisonburg Electric Commission.

II. Emission Units

Equipment to be operated consists of

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity *	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment							
3	ST3	English Boiler (constructed 1996-1997)	43.2 MMBtu/hr	Low NO _x Burner	#3 LNB	NO _x	11/18/05
4	ST4	English Boiler (constructed 1996-1997)	43.2 MMBtu/hr	Low NO _x Burner	#4 LNB	NO _x	11/18/05
8	ST8	Kamptech Terminator 5000 Universal Roller Shredder	1.075 MMBtu/hr	—	—	—	11/18/05
Municipal Waste Combustion Units							
1	ST1	Barlow Projects Municipal Waste Combustion Unit (MWCU)	100 tons/day	Fabric Filter ----- Dry-Dry Flue Gas Scrubbing System ----- Carbon Injection System	# 1 FF ----- # 1 FGSS ----- # 1 CIS	PM, PM-10 ----- HCl, SO ₂ ----- Mercury, Dioxin	11/18/05
2	ST2	Barlow Projects Municipal Waste Combustion Unit (MWCU)	100 tons/day	Fabric Filters ----- Dry-Dry Flue Gas Scrubbing System ----- Carbon Injection System	# 2 FF ----- # 2 FGSS ----- # 2 CIS	PM, PM-10 ----- HCl, SO ₂ ----- Mercury, Dioxin	11/18/05

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement

III. Fuel Burning Equipment Requirements – (Ref. Nos. 3, 4 and 8)

A. Limitations

1. The approved fuel for the two boilers (Ref. Nos. 3 and 4) are natural gas and distillate oil. A change in the fuels may require a permit to modify and operate.
(9 VAC 5-80-110 and Condition 26 of 11/18/05 Permit)
2. The approved fuel for the shredder (Ref. No. 8) is distillate oil. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-110 and Condition 27 of 11/18/05 Permit)
3. The two boilers (Ref. Nos. 3 and 4) combined shall consume no more than 715 million cubic feet of natural gas and 1,296,000 gallons of distillate oil per year, calculated monthly as the sum of each consecutive 12 month period.
(9 VAC 5-80-110 and Condition 28 of 11/18/05 Permit)
4. The shredder (Ref. No. 8) shall consume no more than 35,040 gallons of distillate oil per year, calculated monthly as the sum of each consecutive 12-month period.
(9 VAC 5-80-110 and Condition 29 of 11/18/05 Permit)

5. The distillate oil shall meet the specifications below:

DISTILLATE OIL that meets ASTM D396-78 specifications for numbers 1 or 2 fuel oil:

Maximum sulfur content per shipment: 0.05% S

(9VAC 5-80-110 and Condition 30 of 11/18/05 Permit)

6. Emissions from the operation of each boiler (Ref. Nos. 3 and 4) shall not exceed the limits specified below:

Particulate Matter	0.62	lbs/hr
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PM-10	0.32	lbs/hr
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Nitrogen Oxides (as NO ₂)	6.17	lbs/hr
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Sulfur Dioxide	2.19	lbs/hr
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Carbon Monoxide	3.56	lbs/hr
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Volatile Organic Compounds	0.23	lbs/hr
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(9 VAC 5-80-110 and Condition 32 of 11/18/05 Permit)

7. Emissions from the operation of the two boilers (Ref. Nos. 3 and 4) shall not exceed the limits specified below:

Particulate Matter	3.37	tons/yr
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PM-10	2.75	tons/yr
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Nitrogen Oxides (as NO ₂)	40.31	tons/yr
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Sulfur Dioxide	4.76	tons/yr
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Carbon Monoxide	30.21	tons/yr
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Volatile Organic Compounds	1.97	tons/yr
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These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with the annual emission limits may be determined as stated in Condition numbers III.A.1, III.A.3 and III.A.5. (9 VAC 5-80-110 and Condition 33 of 11/18/05 Permit)

8. Emissions from the operation of the shredder (Ref. No. 8) shall not exceed the limits specified below:

Particulate Matter	0.33 lbs/hr	0.73 tons/yr
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PM-10	0.33 lbs/hr	0.73 tons/yr
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Nitrogen Oxides (as NO ₂)	4.74 lbs/hr	10.39 tons/yr
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Sulfur Dioxide	0.32 lbs/hr	0.68 tons/yr
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Carbon Monoxide	1.02 lbs/hr	2.24 tons/yr
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Volatile Organic Compounds	0.38 lbs/hr	0.82 tons/yr
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These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with the annual emission limits may be determined as stated in Conditions III.A.2, III.A.4 and III.A.5.

(9 VAC 5-80-110 and Condition 34 of 11/18/05 Permit)

9. Visible emissions from the two boiler (Ref. Nos. 3 and 4) stacks shall not exceed 10 percent opacity except during one six-minute period in any hour in which visible emissions shall not exceed 20 percent opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, or malfunction.

(9 VAC 5-80-110 and Condition 35 of 11/18/05 Permit)

10. Visible emissions from the shredder (Ref. No. 8) stack shall not exceed 10 percent opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A).

(9 VAC 5-80-110 and Condition 36 of 11/18/05 Permit)

11. Boiler emissions shall be controlled by proper operation and maintenance. Boiler operators shall be trained in the proper operation of all such equipment. Training shall consist of a review and familiarization of the manufacturer's operating instructions, at minimum. The permittee shall maintain records of the required training including a statement of time, place and nature of training provided. The permittee shall have available good written operating procedures and a maintenance schedule for the boiler. These procedures shall be based on the manufacturer's recommendations, at minimum. All records required by this condition shall be kept on site and made available for inspection by the DEQ.

(9 VAC 5-80-110 and Condition 37 of 11/18/05 Permit)

12. Oxides of nitrogen (NO_x) emissions from the two boilers (Ref. Nos. 3 and 4) shall be controlled by the use of flue gas recirculation (FGR) with low-NO_x burners and good combustion practice.

(9 VAC 5-80-110 and Condition 6 of 11/18/05 Permit)

B. Monitoring

1. The permittee shall conduct visible emission inspections on each of the boiler (Ref. Nos. 3 and 4) stacks in accordance with the following procedures and frequencies:

- a. At a minimum of once per month, the permittee shall determine the presence of visible emissions. If during the inspection, visible emissions are observed, a visible emissions evaluation (VEE) shall be conducted in accordance with 40 CFR Part 60, Appendix A, Method 9. The VEE shall be conducted for a minimum of six minutes. If any of the observations exceed 10 percent opacity,

the VEE shall be conducted for a total of 60 minutes. All visible emission inspections shall be performed when the boiler is operating.

- b. If visible emissions inspections conducted during 12 consecutive months show no visible emissions for a particular boiler stack, the permittee may reduce the monitoring frequency to once per quarter for that boiler stack. Anytime the quarterly visible emissions inspections show visible emissions, or when requested by the DEQ, the monitoring frequency shall be increased to once per month for that stack.
- c. All visible emission inspections, observations and VEE results shall be recorded.

(9 VAC 5-80-110 and Condition 53 of 11/18/05 Permit)

- 2. The permittee shall conduct visible emission inspections on the shredder stack (Ref. No. 8) in accordance with the following procedures and frequencies:
 - a. At a minimum of once per month, the permittee shall determine the presence of visible emissions. If during the inspection visible emissions are observed, a visible emissions evaluation (VEE) shall be conducted in accordance with the 40 CFR Part 60, Appendix A, Method 9. The VEE shall be conducted for a minimum of six minutes.
 - b. Visible emissions inspections shall be performed when the shredder is operating.
 - c. If visible emissions inspections conducted during 12 consecutive months show no visible emissions for the shredder stack, the permittee may reduce the monitoring frequency to once per quarter. Anytime the quarterly visible emissions inspections show visible emissions, or when requested by DEQ, the monitoring frequency shall be increased to once per month for that stack.
 - d. All visible emission inspections, observations and VEE results shall be recorded.

(9 VAC 5-80-110 and Condition 54 of 11/18/05 Permit)

- 3. The permittee shall obtain a certification from the fuel supplier with each shipment of distillate oil. Each fuel supplier certification shall include the following:
 - a. The name of the fuel supplier;
 - b. The date on which the distillate oil was received;
 - c. The volume of distillate oil delivered in the shipment;

- d. A statement that the distillate oil complies with the American Society for testing and Materials specifications D396-78 for numbers 1 or 2 fuel oil; and
- e. The sulfur content of the distillate oil.

(9 VAC 5-80-110 and Condition 31 of 11/18/05 Permit)

C. Recordkeeping

- 1. The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to:
 - a. Daily, monthly, and annual throughput of natural gas (in million cubic feet) and distillate oil (in 1000 gallons) for each boiler (Ref. Nos. 3 and 4) or alternate records as approved in writing by EPA, Region III. Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
 - b. Annual throughput of distillate oil (in 1000 gallons) for the shredder (Ref. No. 8). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
 - c. The DEQ approved, annual pollutant-specific emission factors and the equations used to demonstrate compliance with Conditions III.A.6, III.A.7 and III.A.8.
 - d. Records of all visible emission inspections, observations and VEE.
 - e. All fuel supplier certifications.

These records shall be kept onsite in paper copy or electronic format unless DEQ approves another format. These records shall be available for submittal to the DEQ, or for onsite review by DEQ. All records shall be kept for at least five years.
(9 VAC 5-80-110, 40 CFR §60.1345, 40 CFR §60.1350, 40 CFR §60.1365, 40 CFR §60.1370 and Condition 59 of 11/18/05 Permit)

D. Testing

1. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with the procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
VOC	EPA Methods 18, 25, 25a
NO _x	EPA Method 7
SO ₂	EPA Method 6
CO	EPA Method 10
PM/PM-10	EPA Methods 5, 17
Visible Emissions	EPA Method 9

(9 VAC 5-80-110)

E. Reporting

1. The permittee shall submit fuel quality reports to the Director, Valley Region within 60 days after the end of each semi-annual period. If no shipments of distillate oil were received during the semi-annual period, the semi-annual report shall consist of the dates included in the semi-annual period and a statement that no oil was received during the semi-annual period. If distillate oil was received during the semi-annual period, the reports shall include:
 - a. Dates included in the semi-annual period,
 - b. A copy of all fuel supplier certifications for all shipments of distillate oil received during the semi-annual period or a semi-annual summary from each fuel supplier that includes the information specified in Condition III.B.3 for each shipment of distillate oil, and
 - c. A signed statement from the owner or operator of the facility that the fuel supplier certifications or summaries of fuel supplier certifications represent all of the distillate oil burned or received at the facility.

One copy of the semi-annual report shall be submitted to the U.S. Environmental Protection Agency at the address specified below:

Associate Director
Office of Air Enforcement (3AP10)
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

(9 VAC 5-80-110, 40 CFR §6060.19(d) and Condition 58 of 11/18/05 Permit)

IV. Municipal Waste Combustion Units – (Ref. Nos. 1 and 2)

A. Limitations

1. Particulate emissions from the two municipal waste combustion units (MWCU) (Ref. Nos. 1 and 2) shall be controlled by fabric filters. Each fabric filter shall be provided with adequate access for inspection and shall be in operation when the MWCUs are in normal operating mode (at all times except during startup, shutdown, and malfunction as defined in Condition IV.A.8).
(9 VAC 5-80-110 and Condition 3 of 11/18/05 Permit)
2. Acid gas (HCl and SO₂) emissions from each MWCU (Ref. Nos. 1 and 2) shall be controlled by a dry-dry flue gas scrubbing system using a hydrated lime sorbent or other DEQ approved suitable sorbent. The scrubber shall be provided with adequate access for inspection and shall be in operation when the MWCUs are in normal operating mode (at all times except during startup, shutdown, and malfunction as defined in Condition IV.A.8).
(9 VAC 5-80-110 and Condition 4 of 11/18/05 Permit)
3. Mercury and dioxins/furans emissions from each MWCU (Ref. Nos. 1 and 2) shall be controlled by a carbon injection system. The carbon injection system shall be provided with adequate access for inspection and shall be in normal operating mode (at all times except during startup, shutdown, and malfunction as defined in Condition IV.A.8).
(9 VAC 5-80-110 and Condition 5 of 11/18/05 Permit)
4. The material approved to be incinerated is municipal solid waste, as defined in 40 CFR §60.1465.
(9 VAC 5-80-110 and Condition 14 of 11/18/05 Permit)
5. Each MWCU (Ref. Nos. 1 and 2) shall be charged with no more than 34,675 tons per year of municipal solid waste. Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
(9 VAC 5-80-110, 40 CFR §60.1045 and Condition 15 of 11/18/05 Permit)

6. The approved fuels for the auxiliary burner at each MWCU (Ref. Nos. 1 and 2) are natural gas and distillate oil. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-110 and Condition 16 of 11/18/05 Permit)
7. Emissions from the operation of each MWCU (Ref. Nos. 1 and 2) shall not exceed the limits specified below:

Pollutants	Emission Limits*	Averaging Times
Dioxins/Furans (total mass basis)	13 nanograms per dry standard cubic meter	3-run average (minimum run duration is 4 hours)
Cadmium	0.020 milligrams per dry standard cubic meter	3-run average (run duration specified in test method)
Lead	0.20 milligrams per dry standard cubic meter	3-run average (run duration specified in test method)
Mercury	0.080 milligrams per dry standard cubic meter or 85 percent reduction of potential mercury emissions	3-run average (run duration specified in test method)
Opacity	10 percent	Thirty 6-minute average
Particulate Matter	24 milligrams per dry standard cubic meter	3-run average (run duration specified in test method)
Hydrogen Chloride	25 parts per million by dry volume or 95 percent reduction of potential hydrogen chloride emissions	3-run average (run duration specified in test method)
Nitrogen Oxides	250 parts per million by dry volume	3-run average (run duration specified in test method)
Sulfur Dioxide	30 parts per million by dry volume or 80 percent reduction of potential sulfur dioxide emissions	24-hour daily block geometric average concentration or percent reduction
Carbon Monoxide	100 parts per million by dry volume	4-hour
Fugitive Ash	Visible emissions for no more than 5 percent of hourly observation period	Three 1-hour observation periods

*All emission limits (except opacity) are measured at 7 percent oxygen

Compliance with the emission limits for dioxins/furans (total mass basis), cadmium, lead, mercury, opacity, particulate matter, nitrogen oxides, hydrogen chloride and fugitive ash shall be determined by stack tests as required by Condition IV.D.3.

Compliance with the emission limits for sulfur dioxide and carbon monoxide shall be determined by continuous emission monitoring systems as required by Condition IV.B.1.

(9 VAC 5-80-110, 40 CFR §60.1215 and Condition 17 of 11/18/05 Permit)

8. The emission limits contained in Condition IV.A.7 apply at all times except during periods of MWCU startup, shutdown, or malfunction.
- Each startup, shutdown, or malfunction must not last for longer than 3 hours. Startup period means the period when a MWCU begins the continuous combustion of municipal waste. It does not include any warm-up period during which the MWCU combusts fossil fuel but receives no municipal solid waste.
 - A maximum of 3 hours of test data can be dismissed from compliance calculations during periods of startup, shutdown, or malfunction.
 - During periods of startup, shutdown, or malfunction periods longer than 3 hours, emissions data cannot be discarded from compliance calculations and all provisions under 40 CFR §60.11(d) apply.

(9 VAC 5-80-110, 40 CFR §60.1220, 40 CFR §60.1465 and Condition 18 of 11/18/05 Permit)

9. Emissions from the operation of each MWCU (Ref. Nos. 1 and 2) shall not exceed the limits specified below:

Particulate Matter	1.68 lbs/hr	7.00 tons/yr
PM-10	1.68 lbs/hr	7.00 tons/yr
Nitrogen Oxides (as NO ₂)	19.69 lbs/hr	81.92 tons/yr
Sulfur Dioxide	5.50 lbs/hr	22.90 tons/yr
Carbon Monoxide	8.03 lbs/hr	33.40 tons/yr
Volatile Organic Compounds	0.42 lbs/hr	1.75 tons/yr
Hydrogen Chloride	2.58 lbs/hr	10.74 tons/yr

Compliance with the emission limits for particulate matter, nitrogen oxides and hydrogen chloride shall be determined by stack tests as required by Condition IV.D.3. All particulate matter shall be considered as PM-10 and compliance with PM-10 emission limits shall be determined by stack tests for particulate matter.

Compliance with the emission limits for sulfur dioxide and carbon monoxide shall be determined by continuous emission monitoring systems as required by Condition IV.B.1. Annual emission limits for volatile organic compounds are derived from the estimated overall emission contribution from operating limits in Condition IV.A.5, including periods of startup, shutdown, and malfunction. Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits for volatile organic compounds.

(9 VAC 5-80-110 and Condition 19 of 11/18/05 Permit)

10. The following operator training requirements apply:

- a. Three types of employees must complete the EPA or State-approved operator training course:
 - i. Chief facility operators.
 - ii. Shift supervisors.
 - iii. Control room operators.
- b. The employees listed in item a. must complete the operator training course by the date before an employee assumes responsibilities that affect operation of the MWCU.

(9 VAC 5-80-110, 40 CFR §60.1155, 40 CFR §60.1160 and Condition 20 of 11/18/05 Permit)

11. The following plant-specific training requirements apply:

- a. All employees with responsibilities that affect how a MWCU operates must complete the plant-specific training course. These include the following employees:
 - i. Chief-facility operators.
 - ii. Shift supervisors.
 - iii. Control room operators.
 - iv. Ash handlers.
 - v. Maintenance personnel.

vi. Crane or load handlers.

b. The permittee shall do following four things for the plant-specific training:

i. Develop a specific operating manual for the plant within six months after the MWCU initial startup.

ii. Establish a program to review the plant-specific operating manual with people whose responsibilities affect the operation of the MWCU. The initial review shall be completed by the date before an employee assumes responsibilities that affect operation of the MWCU.

iii. Update the manual annually.

iv. Review the manual with staff annually.

(9 VAC 5-80-110, 40 CFR §60.1155, 40 CFR §60.1165, 40 CFR §60.1170 and Condition 21 of 11/18/05 Permit)

12. The permittee shall include the following 11 items, at a minimum, in the operating manual as required in Condition IV.A.11.b.i.

a. A summary of all applicable requirements in 40 CFR Part 60, Subpart AAAA.

b. A description of the basic combustion principles that apply to MWCU.

c. Procedures for receiving, handling, and feeding municipal solid waste.

d. Procedures to be followed during periods of startup, shutdown, and malfunction of the MWCU.

e. Procedures for maintaining a proper level of combustion air supply.

f. Procedures for operating the MWCU with the requirements contained in 40 CFR Part 60, Subpart AAAA.

g. Procedures for responding to periodic upset or off- specification conditions.

h. Procedures for minimizing carryover of particulate matter.

i. Procedures for handling ash.

j. Procedures for monitoring emissions from the MWCU.

k. Procedures for recordkeeping and reporting.

The permittee shall keep the operating manual in an easily accessible location at the plant. It must be available for review or inspection by all employees who must review it and by the DEQ.

(9 VAC 5-80-110, 40 CFR §60.1175, 40 CFR §60.1180 and Condition 22 of 11/18/05 Permit)

13. The following operator certification requirements apply for MWCUs (Ref. Nos. 1 and 2):

- a. Provisional operator certification from the American Society of Mechanical Engineers (QRO-1-1994 (incorporated by reference in 40 CFR §60.17(h)(1))) or a current provisional operator certification from an applicable state certification program.
- b. Each chief facility operator and shift supervisor must obtain a provisional certification by six months after they transfer to the MWCU or six months after they are hired to work at the MWCU.
- c. Each chief facility operator and shift supervisor must take one of three actions:
 - i. Obtain a full certification from the American Society of Mechanical Engineers or a State certification program in Virginia.
 - ii. Schedule a full certification exam with the American Society of Mechanical Engineers (QRO-1-1994 (incorporated by reference in 40 CFR §60.17(h)(1))).
 - iii. Schedule a full certification exam with a certification program in Virginia.
- d. The chief facility operator and shift supervisor must obtain the full certification or be scheduled to take the certification exam by six months after they transfer to the MWCU or six months after they are hired to work at the MWCU.
- e. After the required date for full or provisional certifications, the permittee shall not operate the MWCU unless one of four employees is on duty:
 - i. A fully certified chief facility operator.
 - ii. A provisionally certified chief facility operator who is scheduled to take the full certification exam.
 - iii. A fully certified shift supervisor.

- iv. A provisionally certified shift supervisor who is scheduled to take the full certification exam.
- f. If the certified chief facility operator and certified shift supervisor both are unavailable, a provisionally certified control room operator at the MWCU may fulfill the certified operator requirement. Depending on the length of time that a certified chief facility operator and certified shift supervisor are away, the permittee must meet one of three criteria:
 - i. When the certified chief facility operator and certified shift supervisor are both offsite for 12 hours or less, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by DEQ.
 - ii. When the certified chief facility operator and certified shift supervisor are offsite for more than 12 hours, but for 2 weeks or less, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by DEQ. However, the permittee must record the period when the certified chief facility operator and certified shift supervisor are offsite and include this information in the annual report as required under Condition IV.E.1.
 - iii. When the certified chief facility operator and certified shift supervisor are offsite for more than 2 weeks, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties. However, the permittee must take two actions:
 - 1) Notify DEQ in writing. In the notice, state what caused the absence and what you are doing to ensure that a certified chief facility operator or certified shift supervisor is on-site.
 - 2) Submit a status report and corrective action summary to DEQ every 4 weeks following the initial notification. If DEQ notifies you that your status report or corrective action summary is disapproved, the MWCU may continue operation for 90 days, but then must cease operation. If corrective actions are taken in the 90 day period such that DEQ withdraws the disapproval, MWCU operation may continue.

(9 VAC 5-80-110, 40 CFR §60.1185, 40 CFR §60.1190, 40 CFR §60.1195 and Condition 23 of 11/18/05 Permit)

14. The following operating practice requirements apply for the MWCUs (Ref. Nos. 1 and 2):

- a. The permittee shall not operate the MWCU at loads greater than 110 percent of the maximum demonstrated unit load of the MWCU (4-hour block average), as specified under “Definitions” in 40 CFR §60.1465.
- b. The permittee shall not operate the MWCU so that the temperature at the inlet of the particulate matter control device exceeds 17⁰C above the maximum demonstrated temperature of the particulate matter control device (4-hour block average), as specified under “Definitions” in 40 CFR §60.1465.
- c. The permittee shall maintain an 8-hour block average carbon feed rate at or above the highest average level established during the most recent dioxins/furans or mercury test.
- d. The permittee shall evaluate total carbon usage for each calendar quarter. The total amount of carbon purchased and delivered to the municipal waste combustion plant must be at or above the required quarterly usage of carbon. At the permittee’s option, the permittee may choose to evaluate required quarterly carbon usage on a MWCU basis for each individual MWCU at the plant. The permittee shall calculate the required quarterly usage of carbon using the appropriate equations given below:
 - i. Quarterly carbon usage on plant basis:

Where:

$$C = \sum_{i=1}^n f_i \times h_i$$

C = required quarterly carbon usage for the plant in kilograms (or pounds).

f_i = required carbon feed rate for the MWCU in kilograms (or pounds) per hour. This is the average carbon feed rate during the most recent mercury or dioxin/furans stack tests (whichever has a higher feed rate).

h_i = number of hours the MWCU was in operation during the calendar quarter (hours).

n = number of MWCUs, i, located at the plant.

- ii. Quarterly carbon usage on unit basis:

$$C = f * h$$

Where:

C = required quarterly carbon usage for the unit in kilograms (or pounds).

f = required carbon feed rate for the MWCU in kilograms (or pounds) per hour. This is the average carbon feed rate during the most recent mercury or dioxins/furans stack tests (whichever has a higher feed rate).

h = number of hours the MWCU was in operation during the calendar quarter (hours).

- e. The MWCU is exempt from limits on load level, temperature at the inlet of the particulate matter control device, and carbon feed rate during any of five situations:
 - i. During the annual tests for dioxins/furans.
 - ii. During the annual mercury tests (for carbon feed rate requirements only).
 - iii. During the 2 weeks preceding the annual tests for dioxins/ furans.
 - iv. During the 2 weeks preceding the annual mercury tests (for carbon feed rate requirements only).
 - v. Whenever DEQ permits to do any of following five activities:
 - 1) Evaluate system performance.
 - 2) Test new technology or control technologies.
 - 3) Perform diagnostic testing.
 - 4) Perform other activities to improve the performance of the MWCU.
 - 5) Perform other activities to advance the state of the art for emission controls for the MWCU.

(9 VAC 5-80-110, 40 CFR §60.1200,40 CFR §60.1460(f) and Condition 24 of 11/18/05 Permit)

B. Monitoring

1. Continuous Emission Monitoring System (CEMS) for oxygen (or carbon dioxide), sulfur dioxide, and carbon monoxide shall be installed, calibrated, maintained, and operated at each MWCU. The permittee must use data from CEMS for sulfur dioxide and carbon monoxide to demonstrate compliance with the emission limits specified in Condition IV.A.7. Each CEMS shall be installed, evaluated, and operated according to the "Monitoring Requirements" in 40 CFR §60.13. The CEMS for oxygen (or carbon dioxide), sulfur dioxide, and carbon monoxide shall be installed at the outlet of the air pollution control device. If the permittee elects to demonstrate compliance by monitoring the percent reduction of sulfur dioxide, CEMS for sulfur dioxide and oxygen (or carbon dioxide) must also be installed at the inlet of the air pollution control device. The permittee must monitor the oxygen (or carbon dioxide) concentration at each location where sulfur dioxide and carbon monoxide are monitored. The permittee may elect to monitor carbon dioxide instead of oxygen as diluent. If carbon dioxide is monitored, then an oxygen monitor is not required, and the permittee must follow the requirements in Condition IV.B.2. The permittee can apply to the EPA for approval to use an alternative monitoring method under 40 CFR §60.13.i., if the permittee prefers to use an alternative sulfur dioxide monitoring method, such as parametric monitoring, or cannot monitor emissions at the inlet of the air pollution control device to determine percent reduction.

(9 VAC 5-80-110, 40 CFR §60.1230 and Condition 39 of 11/18/05 Permit)

2. If the permittee elects to monitor carbon dioxide instead of oxygen as a diluent gas, the permittee shall establish the relationship between oxygen and carbon dioxide during the initial evaluation of the CEMS. The permittee may establish the relationship during annual evaluations. The relationship is established using three procedures as described below:
 - a. Use EPA Reference Method 3A or 3B of 40 CFR Part 60, Appendix A to determine oxygen concentration at the location of your carbon dioxide monitor.
 - b. Conduct at least three test runs for oxygen. Make sure each test run represents a 1-hour average and that sampling continues for at least 30 minutes in each hour.
 - c. Use the fuel-factor equation in EPA Reference Method 3B of 40 CFR Part 60, Appendix A to determine the relationship between oxygen and carbon dioxide.

(9 VAC 5-80-110, 40 CFR §60.1255 and Condition 40 of 11/18/05 Permit)

3. The following requirements apply for the performance evaluations of continuous emission monitoring systems:
 - a. Conduct daily, quarterly, and annual evaluations of the continuous emission monitoring systems that measure oxygen (or carbon dioxide), sulfur dioxide and carbon monoxide.
 - b. For annual evaluations, collect data concurrently (or within 30 to 60 minutes) using the oxygen (or carbon dioxide) continuous emission monitoring system, the sulfur dioxide, and carbon monoxide continuous emission monitoring systems, as appropriate, and the appropriate test methods specified in 40 CFR Part 60, Subpart AAAA, Table 3. Collect these data during each annual evaluation of the continuous emission monitoring systems following the applicable performance specifications in Appendix B of 40 CFR Part 60. 40 CFR Part 60, Table 4 of Subpart AAAA shows the performance specifications that apply to each continuous emission monitoring system.
 - c. Follow the quality assurance procedures in Procedure 1 of Appendix F of 40 CFR Part 60 for each continuous emission monitoring system. These procedures include daily calibration drift and quarterly accuracy determinations.

(9 VAC 5-80-110, 40 CFR §60.1240 and Condition 41 of 11/18/05 Permit)

4. The oxygen CEMS is exempt from the following two requirements:
 - a. Section 2.3. of Performance Specification 3 in Appendix B of 40 CFR Part 60 (relative accuracy requirement).
 - b. Section 5.1.1. of Appendix F of 40 CFR Part 60 (relative accuracy test audit).

(9 VAC 5-80-110, 40 CFR §60.1245 and Condition 42 of 11/18/05 Permit)

5. The following schedule applies for evaluating CEMS:
 - a. Conduct annual evaluations of the continuous emission monitoring systems no more than 13 months after the previous evaluation was conducted.
 - b. Evaluate the continuous emission monitoring systems daily and quarterly as specified in Appendix F of 40 CFR Part 60.

(9 VAC 5-80-110, 40 CFR §60.1250 and Condition 43 of 11/18/05 Permit)

6. The following conditions apply regarding collection of monitoring data and enforceability of the data collection requirements with CEMS:
 - a. Obtain 1-hour arithmetic averages. Make sure the averages for sulfur dioxide, and carbon monoxide are in parts per million by dry volume at 7 percent oxygen (or the equivalent carbon dioxide level). Use the 1-hour averages of oxygen (or carbon dioxide) data from the continuous emission monitoring system to determine the actual oxygen (or carbon dioxide) level and to calculate emissions at 7 percent oxygen (or the equivalent carbon dioxide level).
 - b. Obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average. 40 CFR §60.13(e)(2) requires the continuous emission monitoring systems to complete at least one cycle of operation (sampling, analyzing, and data recording) for each 15-minute period.
 - c. Obtain valid 1-hour averages for 75 percent of the operating hours per day and for 90 percent of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste.
 - d. If the minimum data required in item a. through c. above is not obtained, the permittee is in violation of this data collection requirement regardless of the emission level monitored, and must notify DEQ according to Condition IV.E.1.e.
 - e. If the minimum data required in items a. through c. above is not obtained, the permittee must still use all valid data from the continuous emission monitoring systems in calculating emission concentrations and percent reductions in accordance with Condition IV.B.7.
 - f. If any of continuous emission monitoring systems are temporarily unavailable to meet the data collection requirement, refer to Table 4 of 40 CFR Part 60, Subpart AAAA. This table shows alternate methods for collecting data when systems malfunction or when repairs, calibration checks, or zero and span checks keep you from collecting the minimum amount of data.
- (9 VAC 5-80-110, 40 CFR §60.1260, 40 CFR §60.1280 and Condition 44 of 11/18/05)
7. The following procedures shall be used to convert 1-hour arithmetic averages into the appropriate averaging times and units:
 - a. Use the equation in Condition IV.D.2.d to calculate emissions at 7 percent oxygen.

- b. Use EPA Reference Method 19, section 4.3 (40 CFR Part 60, Appendix A), to calculate the daily geometric average concentrations of sulfur dioxide emissions. If percent reduction of sulfur dioxide is monitored, use EPA Reference Method 19, section 5.4 (40 CFR Part 60, Appendix A), to determine the daily geometric average percent reduction of potential sulfur dioxide emissions.
- c. Use EPA Reference Method 19, section 4.1 (40 CFR Part 60, Appendix A) to calculate the 4-hour averages for concentrations of carbon monoxide.

(9 VAC 5-80-10, 40 CFR §60.1265 and Condition 45 of 11/18/05 Permit)

- 8. A Continuous Opacity Monitoring System (COMS) shall be installed, calibrated, maintained, and operated to measure and record the opacity of emissions from each MWCU (Ref. Nos. 1 and 2) stack. Each COMS shall be installed, evaluated, and operated according to the "Monitoring Requirements" in 40 CFR §60.13. Use the required span values and applicable performance specifications in Table 4 of 40 CFR Part 60, Subpart AAAA for the operation of COMS.
(9 VAC 5-80-110, 40 CFR §60.1270, 40 CFR §60.1275 and Condition 46 of 11/18/05 Permit)
- 9. Annual performance evaluations of the COMS shall be conducted in accordance with Performance Specification 1 in Appendix B of 40 CFR Part 60. The evaluation shall be conducted no more than 13 months after the previous evaluation. Annual evaluations of the COMS shall be submitted as part of the annual report as required in Condition IV.E.1.
(9 VAC 5-80-110, 40 CFR §60.1270 and Condition 47 of 11/18/05 Permit)
- 10. The combustion chamber temperature at each MWCU (Ref. Nos. 1 and 2) shall be maintained at a minimum temperature of 1500 degrees F, when the unit is in normal operating mode (at all times except during startup, shutdown, and malfunction as defined in Condition IV.A.8). The combustion chamber shall be equipped with a device to continuously measure the temperature.
(9 VAC 5-80-110 and Condition 7 of 11/18/05 Permit)
- 11. Each fabric filter shall be equipped to continuously measure the differential pressure drop across the fabric filter. The monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. The monitoring device shall be provided with adequate access for inspection and shall be in operation when the fabric filter is operating.
(9 VAC 5-80-110 and Condition 8 of 11/18/05 Permit)
- 12. The monitoring device used to continuously measure the differential pressure drop across the fabric filter shall be observed by the permittee with a frequency as recommended by the manufacturer. The permittee shall keep a log of the

observations from the monitoring device. These records shall be kept onsite in paper copy or electronic format unless DEQ approves another format.

(9 VAC 5-80-110 and Condition 9 of 11/18/05 Permit)

13. The permittee shall install, calibrate, maintain, and operate a device to continuously measure the temperature of the flue gas stream at the inlet of each fabric filter.

(9 VAC 5-80-110 and Condition 11 of 11/18/05 Permit)

14. The permittee shall monitor the load level of each MWCU (Ref. Nos. 1 and 2) by installing, calibrating, maintaining, and operating either a steam flowmeter or a feed water flowmeter. Additionally, the following five requirements must be met:

- a. Continuously measure and record the measurements of steam (or feed water) in kilograms (or pounds) per hour.
- b. Calculate steam (or feed water) flow in 4-hour block averages.
- c. Calculate the steam (or feed water) flow rate using the method in "American Society of Mechanical Engineers Power Test Codes: Test Code for Steam Generating Units, Power Test Code 4.1-1964 (R1991)," section 4 (incorporated by reference in 40 CFR §60.17 (h)(2)).
- d. Design, construct, install, calibrate, and use nozzles or orifices for flow rate measurements, using the recommendations in "American Society of Mechanical Engineers Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters," 6th Edition (1971), chapter 4 (incorporated by reference in 40 CFR §60.17 (h)(3)).
- e. Before each dioxins/furans stack test, or at least once a year, calibrate all signal conversion elements associated with steam (or feed water) flow measurements according to the manufacturer instructions.

(9 VAC 5-80-110, 40 CFR §60.1320 and Condition 10 of 11/18/05 Permit)

15. The permittee shall monitor the carbon feed rate at each MWCU (Ref. Nos. 1 and 2) by meeting the following three requirements:

- a. Select a carbon injection system operating parameter that can be used to calculate carbon feed rate (for example, screw feeder speed).

- b. During each dioxins/furans and mercury stack test, determine the average carbon feed rate in kilograms (or pounds) per hour. Also, determine the average operating parameter level that correlates to the carbon feed rate. Establish a relationship between the operating parameter and the carbon feed rate in order to calculate the carbon feed rate based on the operating parameter level.
- c. Continuously monitor the selected operating parameter during all periods when the MWCU is operating and combusting waste and calculate the 8-hour block average carbon feed rate in kilograms (or pounds) per hour, based on the selected operating parameter. When calculating the 8-hour block average:
 - i. Exclude hours when the MWCU is not operating.
 - ii. Include hours when the MWCU is operating but the carbon feed system is not functioning correctly.

(9 VAC 5-80-110, 40 CFR §60.1330 and Condition 12 of 11/18/05 Permit)

16. The permittee shall comply with the following data collection requirements:

- a. The permittee shall obtain 1-hour arithmetic averages for the following three parameters as described in Conditions IV.B.13, IV.B.14 and IV.B.15:
 - i. Temperature of the flue gases at the inlet of the each particulate matter control device.
 - ii. Load level of each MWCU.
 - iii. Carbon feed rate.
- b. The permittee shall obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average.
- c. The permittee shall obtain valid 1-hour averages for, at a minimum, 75 percent of the operating hours per day and for 90 percent of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste.
- d. The permittee shall be in violation of this data collection requirement if the minimum data required in items a. through c. of this condition are not obtained, and the permittee shall notify DEQ according to Condition IV.E.1.e.

(9 VAC 5-80-110, 40 CFR §60.1335 and Condition 13 of 11/18/05 Permit)

C. Recordkeeping

1. The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to:
 - a. Annual throughput of solid waste to each MWCU (Ref. No. 1 and 2), calculated monthly as the sum of each consecutive 12-month period.
 - b. Continuous monitoring system emissions data, calibrations and calibration checks, percent operating time, and excess emissions.
 - c. The DEQ approved, annual pollutant-specific emission factors and the equations used to demonstrate compliance with Condition IV.A.9.
 - d. Materials separation plan and siting analysis to include the following:
 - i. The date of each record.
 - ii. The final materials separation plan.
 - iii. The siting analysis.
 - iv. A record of the location and date of the public meetings.
 - v. Responses to the public comments received during the public comment periods.
 - e. Operator training and certification for the MWCU to include the following:
 - i. Records of provisional certifications. Include three items:
 - 1) Names of the chief facility operator, shift supervisors, and control room operators who are provisionally certified by the American Society of Mechanical Engineers or an equivalent State-approved certification program separation plan and siting analysis to include the following:
 - 2) Dates of the initial provisional certifications.
 - 3) Documentation showing current provisional certifications.
 - ii. Records of full certifications. Include three items:

- 1) Names of the chief facility operator, shift supervisors, and control room operators who are fully certified by the American Society of Mechanical Engineers or an equivalent State-approved certification program.
 - 2) Dates of initial and renewal full certifications.
 - 3) Documentation showing current full certifications.
- iii. Records showing completion of the operator training course. Include three items:
- 1) Names of the chief facility operator, shift supervisors, and control room operators who have completed the EPA or State municipal waste combustion operator-training course.
 - 2) Dates of completion of the operator training course.
 - 3) Documentation showing completion of the operator training course.
- iv. Records of reviews for plant-specific operating manuals. Include three items:
- 1) Names of persons who have reviewed the operating manual.
 - 2) Date of the initial review.
 - 3) Dates of subsequent annual reviews.
- v. Records of when a certified operator is temporarily offsite. Include two main items:
- 1) If the certified chief facility operator and certified shift supervisor are offsite for more than 12 hours, but for 2 weeks or less, and no other certified operator is onsite, record the dates that the certified chief facility operator and certified shift supervisor were offsite.
 - 2) When the certified chief facility operator and certified shift supervisor are offsite for more than 2 weeks and no other certified operator is onsite, keep records of four items:
 - (a) Notice that all certified persons are offsite.
 - (b) The conditions that cause these people to be offsite.
 - (c) The corrective actions being taken to ensure a certified chief facility operator or certified shift supervisor is onsite.

- (d) Copies of the written reports submitted every 4 weeks that summarize the actions taken to ensure that a certified chief facility operator or certified shift supervisor will be onsite.

vi. Records of calendar dates. Include the calendar date on each record.

f. Records of stack tests required under Condition IV.D.3:

i. The results of the stack tests for nine pollutants or parameters recorded in the appropriate units of measure specified in Condition IV.A.7.

1) Dioxins/furans.

2) Cadmium.

3) Lead.

4) Mercury.

5) Opacity.

6) Particulate matter.

7) Nitrogen oxides.

8) Hydrogen chloride.

9) Fugitive ash.

ii. Test reports including supporting calculations that document the results of all stack tests.

iii. The maximum demonstrated load of the MWCUs and maximum temperature at the inlet of the particulate matter control device during all stack tests for dioxins/furans emissions.

iv. The calendar date of each record.

g. Records of continuously monitored pollutants and parameters to include following eight items:

i. Records of monitoring data. Document five parameters measured using continuous monitoring systems:

- 1) All 6-minute average levels of opacity.
 - 2) All 1-hour average concentrations of sulfur dioxide emissions.
 - 3) All 1-hour average concentrations of carbon monoxide emissions.
 - 4) All 1-hour average load levels of the MWCU.
 - 5) All 1-hour average flue gas temperatures at the inlet of the particulate matter control device.
- ii. Records of average concentrations and percent reductions. Document four parameters:
- 1) All 24-hour daily block geometric average concentrations of sulfur dioxide emissions or average percent reductions of sulfur dioxide emissions.
 - 2) All 4-hour block arithmetic average concentrations of carbon monoxide emissions.
 - 3) All 4-hour block arithmetic average load levels of the MWCU.
 - 4) All 4-hour block arithmetic average flue gas temperatures at the inlet of the particulate matter control device.
- iii. Records of exceedances. Document three items:
- 1) Calendar dates whenever any of the four pollutant or parameter levels recorded in item ii., or the opacity level recorded in item i. 1) above did not meet the emission limits or operating levels specified in this permit.
 - 2) Reasons the applicable emission limits or operating levels are exceeded.
 - 3) Corrective actions taken, or going to be taken, to meet the emission limits or operating levels.
- iv. Records of minimum data. Document three items:
- 1) Calendar dates for which the minimum amount of data required under Conditions IV.B.6 and IV.B.16 were not collected. Record these dates for four types of pollutants and parameters:
 - (a) Sulfur dioxide emissions.

- (b) Carbon monoxide emissions.
 - (c) Load levels of the MWCU.
 - (d) Temperatures of the flue gases at the inlet of the particulate matter control device.
- 2) Reasons the minimum data were not collected.
- 3) Corrective actions taken, or going to take, to obtain the required amount of data.
- v. Records of exclusions. Document each time the data were excluded from the calculation of averages for any of the following four pollutants or parameters and the reasons the data were excluded:
 - 1) Sulfur dioxide emissions.
 - 2) Carbon monoxide emissions.
 - 3) Load levels of the MWCU.
 - 4) Temperatures of the flue gases at the inlet of the particulate matter control device.
- vi. Records of drift and accuracy. Document the results of the daily drift tests and quarterly accuracy determinations according to procedure 1 of Appendix F of 40 CFR Part 60. Keep these records for the sulfur dioxide and carbon monoxide continuous emissions monitoring systems.
- vii. Records of the relationship between oxygen and carbon dioxide. Document the relationship between oxygen and carbon dioxide, as specified in Condition IV.B.2 if carbon dioxide was monitored instead of oxygen as a diluent gas.
- viii. Records of calendar dates. Include the calendar date on each record.
- h. Carbon feed rate. Keep records of five items:
 - i. Records of average carbon feed rate. Document five items:
 - 1) Average carbon feed rate (in kilograms or pounds per hour) during all stack tests for dioxins/furans and mercury emissions. Include supporting calculations in the records.

- 2) For the operating parameter chosen to monitor carbon feed rate, average operating level during all stack tests for dioxins/furans and mercury emissions. Include supporting data that document the relationship between the operating parameter and the carbon feed rate.
 - 3) All 8-hour block average carbon feed rates in kilograms (pounds) per hour calculated from the monitored operating parameter.
 - 4) Total carbon purchased and delivered to the municipal waste combustion plant for each calendar quarter. If total carbon purchased and delivered on a MWCU basis was chosen to evaluate, record the total carbon purchased and delivered for each individual MWCU at the plant. Include supporting documentation.
 - 5) Required quarterly usage of carbon for the municipal waste combustion plant, calculated using the appropriate equation in Condition IV.A.14.d. If quarterly usage for carbon on a MWCU basis was chosen to evaluate, record the required quarterly usage for each MWCU at the plant. Include supporting calculations.
- ii. Records of low carbon feed rates. Document three items:
- 1) The calendar dates when the average carbon feed rate over an 8-hour block was less than the average carbon feed rates determined during the most recent stack test for dioxins/furans or mercury emissions (whichever has a higher feed rate).
 - 2) Reasons for the low carbon feed rates.
 - 3) Corrective actions taken or are taking to meet the 8-hour average carbon feed rate requirement.
- iii. Records of minimum carbon feed rate data. Document three items:
- 1) Calendar dates for which the minimum amount of carbon feed rate data were not collected as required under Condition IV.B.16.
 - 2) Reasons the minimum data were not collected.
 - 3) Corrective actions taken or are taking to get the required amount of data.
- iv. Records of exclusions. Document each time data were excluded from the calculation of average carbon feed rates and the reasons the data were excluded.

- v. Records of calendar dates. Include the calendar date on each record.
- i. Initial, annual and semiannual reports.
- j. All fuel supplier certifications.
- k. Records of all visible emissions evaluations.
- l. Records of the observations for the fabric filters as required under Condition IV.B.12.
- m. Records of the load level of each MWCU (Ref. No. 1 and 2) as required under Condition IV.B.14.

These records shall be kept onsite in paper copy or electronic format unless DEQ approves another format. These records shall be available for submittal to the DEQ, or for onsite review by DEQ. All records shall be kept for at least five years. (9 VAC 5-80-110, 40 CFR §60.1345, 40 CFR §60.1350, 40 CFR §60.1365, 40 CFR §60.1370 and Condition 59 of 11/18/05 Permit)

D. Testing

1. The permitted facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. This includes constructing the facility such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing stack or duct that is free from cyclonic flow. Test ports shall be provided when requested in accordance with the applicable performance specification (reference 40 CFR Part 60, Appendix B).
(9 VAC 5-80-110 and Condition 48 of 11/18/05 Permit)
2. The permittee shall follow the procedures below for the annual stack testing required under Condition IV.D.3.
 - a. The permittee shall follow the table below (Requirements for Stack Tests) to establish the sampling location and to determine pollutant concentrations, number of traverse points, individual test methods, and other specific testing requirements for the different pollutants.

Requirements for Stack tests

Pollutants	Test methods to determine the sampling location (40 CFR Part 60, Appendix A)	Test methods to measure pollutant concentration (40 CFR Part 60, Appendix A)	Additional information
Dioxins/Furans	Method 1	Method 23	The minimum sampling time must be 4 hours per test run while the MWCU is operating at full load.
Cadmium	Method 1	Method 29	Compliance testing must be performed while the MWCU is operating at full load.
Lead	Method 1	Method 29	Compliance testing must be performed while the MWCU is operating at full load.
Mercury	Method 1	Method 29	Compliance testing must be performed while the MWCU is operating at full load.
Opacity	Method 9	Method 9	Use Method 9 to determine compliance with opacity limit. 3-hour observation period (thirty 6-minute averages).
Particulate Matter	Method 1	Method 5	The minimum sample matter volume must be 1.0 cubic meters. The probe and filter holder heating systems in the sample train must be set to provide a gas temperature no greater than $160 \pm 14^{\circ} \text{C}$. The minimum sampling time is 1 hour.
Nitrogen Oxides	Method 1	Method 19	Compliance testing must be performed while the MWCU is operating at full load.
Hydrogen Chloride	Method 1	Method 26 or 26A	Compliance testing must be performed while the MWCU is operating at full load.
Fugitive Ash	Not Applicable	Method 22 (visible emissions)	The three 1-hour observation period must include periods when the facility transfers fugitive ash from the MWCU to the area where the fugitive ash is stored or loaded into containers or trucks.

- b. Stack tests for all listed pollutants consist of at least three test runs, as specified in 40 CFR §60.8 (Performance Tests). Use the average of the pollutant emission concentrations from the three test runs to determine compliance with the emission limits in Conditions IV.A.7 and IV.A.9.
- c. Obtain an oxygen (or carbon dioxide) measurement at the same time as your pollutant measurements to determine diluent gas levels, as specified in Condition IV.B.1.
- d. Use the following equations to calculate emission levels at 7 percent oxygen (or an equivalent carbon dioxide basis), the percent reduction in potential hydrogen chloride emissions, and the reduction efficiency for mercury emissions. See the individual test methods in Table 5 of 40 CFR Part 60, Subpart AAAAA for other required equations.

- i. Correct any pollutant concentration to 7 percent oxygen using the following equation:

$$C_{7\%} = C_{unc} * (13.9) * (1 / (20.9 - C_{O_2}))$$

Where:

$C_{7\%}$ = concentration corrected to 7 percent oxygen.

C_{unc} = uncorrected pollutant concentration.

C_{O_2} = concentration of oxygen (%).

- ii. Calculate the percent reduction in potential mercury emissions (% P_{Hg}) using the following equation:

$$\%P_{Hg} = (E_i - E_o) * (100/E_i)$$

Where:

$\%P_{Hg}$ = percent reduction of potential mercury emissions

E_i = mercury emission concentration as measured at the air pollution control device inlet, corrected to 7 percent oxygen, dry basis

E_o = mercury emission concentration as measured at the air pollution control device outlet, corrected to 7 percent oxygen, dry basis

- iii. Calculate the percent reduction in potential hydrogen chloride emissions (% P_{HCl}) using the following equation:

$$\%P_{HCl} = (E_i - E_o) * (100/E_i)$$

Where:

$\%P_{HCl}$ = percent reduction of the potential hydrogen chloride emissions

E_i = hydrogen chloride emission concentration as measured at the air pollution control device inlet, corrected to 7 percent oxygen, dry basis

E_o = hydrogen chloride emission concentration as measured at the air pollution control device outlet, corrected to 7 percent oxygen, dry basis

- e. The permittee can apply to DEQ for approval under 40 CFR §60.8(b) to use a reference method with minor changes in methodology, use an equivalent method, use an alternative method the results of which DEQ has determined are adequate for demonstrating compliance, waive the requirement for a performance test because the permittee has demonstrated by other means that the MWCUs are in compliance, or use a shorter sampling time or smaller sampling volume.

(9 VAC 5-80-10, 40 CFR §60.1300, 40 CFR §60.1460 and Condition 49 of 11/18/05 Permit)

3. Annual stack tests shall be conducted on each MWCU stack (Ref. Nos. 1 and 2) for dioxins/furans, cadmium, lead, mercury, opacity, particulate matter, nitrogen oxides, hydrogen chloride, and fugitive ash. Each annual stack test shall be conducted no later than 13 months after the previous stack test. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 and the test methods and procedures contained in Condition IV.D.2. The details of the tests are to be arranged with the Director, Valley Region. The permittee shall submit a test protocol at least 30 days prior to testing. Test results shall be submitted to the Director, Valley Region, as part of the annual report required in Condition IV.E.1 and shall conform to the test report format enclosed with this permit.

(9 VAC 5-80-110, 40 CFR §60.1285 and Condition 50 of 11/18/05)

4. The permittee may test less often than as required in Condition IV.D.3 under the following circumstances:
 - a. The permittee may test less often if all stack tests for a given pollutant over 3 consecutive years show compliance with the emission limit. In this case, the permittee is not required to conduct a stack test for that pollutant for the next 2 years. However, the permittee must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows compliance with the emission limit. Thereafter, the permittee must perform stack tests every

third year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission limit, the permittee must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for that pollutant. The provision applies to all pollutants subject to stack testing requirements: dioxins/furans, cadmium, lead, mercury, particulate matter, nitrogen oxides, opacity, hydrogen chloride, and fugitive ash.

- b. The permittee may test less often for dioxins/furans emissions if each MWCU (Ref. Nos. 1 and 2) have demonstrated levels of dioxins/furans emissions less than or equal to 7 nanograms per dry standard cubic meter (total mass) for 2 consecutive years. In this case, the permittee may choose to conduct annual stack tests on only one MWCU per year. This provision only applies to stack testing for dioxins/furans emissions.
 - i. Conduct the stack test no more than 13 months following a stack test on any MWCU. Each year, test a different MWCU in a sequence that you determine. Once a testing sequence is determined, it must not be changed without approval by the Director, Valley Region.
 - ii. If each annual stack test shows levels of dioxins/furans emissions less than or equal to 7 nanograms per dry standard cubic meter (total mass), the permittee may continue stack tests on only one MWCU.
 - iii. If any annual stack test indicates levels of dioxins/furans emissions greater than 7 nanograms per dry standard cubic meter (total mass), the permittee shall conduct subsequent annual stack tests on all MWCUs. The permittee may return to testing one MWCU if it can demonstrate dioxins/furans emission levels less than or equal to 7 nanograms per dry standard cubic meter (total mass) for all MWCUs for 2 consecutive years.

(9 VAC 5-80-110, 40 CFR §60.1305 and Condition 51 of 11/18/05 Permit)

- 5. The permittee may not deviate from the 13-month testing schedules specified in Conditions IV.D.3 and IV.D.4 unless the permittee applies to EPA for an alternative schedule, and the EPA approves the request for alternate scheduling prior to the date on which the permittee would otherwise have been required to conduct the next stack test.

(9 VAC 5-80-110, 40 CFR §60.1310 and Condition 52 of 11/18/05 Permit)

- 6. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the test methods specified in IV.D.2.

(9 VAC 5-80-110)

E. Reporting

1. The permittee shall submit an annual report no later than March 1 of each year that follows the calendar year in which the data are collected. The content and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to:
 - a. The results of the annual stack test for each MWCU, using appropriate units, for nine pollutants as recorded under Condition IV.D.3:
 - i. Dioxins/furans.
 - ii. Cadmium.
 - iii. Lead.
 - iv. Mercury.
 - v. Particulate matter.
 - vi. Nitrogen oxides.
 - vii. Opacity.
 - viii. Hydrogen chloride.
 - ix. Fugitive ash.
 - b. A list of the highest average levels recorded for each MWCU, in the appropriate units. List these values for four pollutants or parameters
 - i. Sulfur dioxide emissions.
 - ii. Carbon monoxide emissions.
 - iii. Load level of the MWCU.
 - iv. Temperature of the flue gases at the inlet of the particulate matter air pollution control device (4-hour block average).
 - c. The highest 6-minute opacity level measured for each MWCU. This value should be based on all 6-minute average opacity levels recorded by the continuous opacity monitoring system (Condition IV.C.1.g.i.1)).
 - d. Records for activated carbon for each MWCU including:

- i. The average carbon feed rates recorded during the most recent dioxins/furans and mercury stack tests.
 - ii. The lowest 8-hour block average carbon feed rate recorded during the year.
 - iii. The total carbon purchased and delivered to the municipal waste combustion plant for each calendar quarter. If total carbon purchased and delivered on a MWCU basis was chosen to evaluate, record the total carbon purchased and delivered for each individual MWCU at the plant.
 - iv. The required quarterly carbon usage of the municipal waste combustion plant, calculated using the appropriate equation in Condition IV.A.14.d. If quarterly usage for carbon is evaluated on a MWCU basis, record the required quarterly usage for each MWCU at the plant.
- e. The total number of days that the permittee did not obtain the minimum number of hours of data for five pollutants or parameters. Include the reasons for not obtaining the data and corrective actions taken to obtain the data in the future. Include data on:
- i. Sulfur dioxide emissions.
 - ii. Carbon monoxide emissions.
 - iii. Load level of the MWCU.
 - iv. Temperature of flue gases at the inlet of the particulate matter air pollution control device.
 - v. Carbon feed rate.
- f. The number of hours excluded from the calculation of average levels (include the reasons for excluding it). Include data for five pollutants or parameters
- i. Sulfur dioxide emissions.
 - ii. Carbon monoxide emissions.
 - iii. Load level of the MWCU.
 - iv. Temperature of the flue gases at the inlet of the particulate matter air pollution control device.
 - v. Carbon feed rate.

- g. A notice of the intent to begin a reduced stack testing schedule for dioxins/furans emissions during the following calendar year, if eligible for alternative scheduling (Condition IV.D.4. a. or b).
 - h. A notice of the intent to begin a reduced stack testing schedule for other pollutants during the following calendar year, if eligible for alternative scheduling (Condition IV.D.4.a).
 - i. A summary of any emission or parameter level that did not meet the limits specified in this permit.
 - j. A summary of the data referenced in items a. through d. above from the year preceding the reporting year. This summary gives DEQ a summary of the performance of the MWCU over a 2-year period.
 - k. If carbon dioxide was monitored instead of oxygen as a diluent gas, documentation of the relationship between oxygen and carbon dioxide, as specified in Condition IV.B.2.
 - l. Documentation of periods when all certified chief facility operators and certified shift supervisors are offsite for more than 12 hours.
 - m. Annual performance evaluations of the COMS
- (9 VAC 5-80-110, 40 CFR §60.19(d), 40 CFR §60.1385, 40 CFR §60.1405, 40 CFR §60.1410 and Condition 55 of 11/18/05 Permit)
- 2. The permittee shall submit a semiannual report on any recorded emission or parameter level that does not meet the requirements for each MWCU (Ref. Nos. 1 and 2) specified in this permit. For data collected during the first half of a calendar year, semiannual report shall be submitted by September 1 of that year. For data collected during the second half of the calendar year, semiannual report shall be submitted by March 1 of the following year. The content and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to:
 - a. For any of the following five pollutants or parameters that exceeded the limits specified in this permit, include the calendar date they exceeded the limits, the averaged and recorded data for that date, the reasons for exceeding the limits, and your corrective actions taken.
 - i. Concentration or percent reduction of sulfur dioxide emissions.
 - ii. Concentration of carbon monoxide emissions.

- iii. Load level of the MWCU.
- iv. Temperature of the flue gases at the inlet of the particulate matter air pollution control device.
- v. Average 6-minute opacity level.
- b. If the results of the annual stack tests (as recorded in Condition IV.D.3) show emissions above the limits specified in Condition IV.A.7 for dioxins/furans, cadmium, lead, mercury, particulate matter, nitrogen oxides, opacity, hydrogen chloride, and fugitive ash, include a copy of the test report that documents the emission levels and corrective actions taken.
- c. Records regarding carbon usage including:
 - i. Documentation of all dates when the 8-hour block average carbon feed rate (calculated from the carbon injection system operating parameter) is less than the highest carbon feed rate established during the most recent mercury and dioxins/furans stack test (as specified in Condition IV.C.1.h.i.1)). Include four items:
 - 1) Eight-hour average carbon feed rate.
 - 2) Reasons for occurrences of low carbon feed rates.
 - 3) The corrective actions taken to meet the carbon feed rate requirement.
 - 4) The calendar date.
 - ii. Documentation of each quarter when total carbon purchased and delivered to the municipal waste combustion plant is less than the total required quarterly usage of carbon. If you choose to evaluate total carbon purchased and delivered on a MWCU basis, record the total carbon purchased and delivered for each individual MWCU at your plant. Include five items:
 - 1) Amount of carbon purchased and delivered to the plant.
 - 2) Required quarterly usage of carbon.
 - 3) Reasons for not meeting the required quarterly usage of carbon.
 - 4) The corrective actions taken to meet the carbon feed rate requirement.

5) The calendar date.

(9 VAC 5-80-110, 40 CFR §60.19(d), 40 CFR §60.1385, 40 CFR §60.1425 and Condition 56 of 11/18/05 Permit)

3. The reporting dates for annual and semiannual reports as specified in Conditions IV.E.1 and IV.E.2 may be changed upon DEQ's approval. The permittee shall follow procedures on 40 CFR Part 60, Section 60.19(c) to seek approval to change reporting date.

(9 VAC 5-80-110, 40 CFR §60. 13.85, 40 CFR §60. 1420, 40 CFR §60. 1425 and Condition 57 of 11/18/05 Permit)

V. Facility Wide Conditions

A. Limitations

1. The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions:
 - a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance;
 - b. Maintain an inventory of spare parts;
 - c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum;
 - d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.

(9 VAC 5-80-110 and Condition 64 of 11/18/05 Permit)

2. The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standards and shall not return to normal operation until such time as the ambient air quality standard will not be violated.

(9 VAC 5-80-110 and Condition 63 of 11/18/05 Permit)

B. Notifications and Recordkeeping

1. The permittee shall furnish notification to the Director, Valley Region, of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance, which results in excess emissions for more than one hour, at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:
 - a. Identification of the air pollution control equipment to be taken out of service, as well as its location, and registration number;
 - b. The expected length of time that the air pollution control equipment will be out of service;
 - c. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period;
 - d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage

(9 VAC 5-80-110 and Condition 61 of 11/18/05 Permit)

2. The permittee shall maintain records of all maintenance and training records as required under Condition V.A.1. These records shall be available on site for a period of five years and shall be made available to DEQ personnel upon request.

(9 VAC 5-80-110 and Condition 64 of 11/18/05 Permit)

VI. Insignificant Emission Units

The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
-	Two 12,000 gal. # 2 Fuel Oil Storage Tanks	9 VAC 5-80-720 B	VOC	NA
5	70 kW Natural Gas-Fired Generator	9 VAC 5-80-720 C	NA	70 k W

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

VII. Permit Shield & Inapplicable Requirements

Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements that have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
None Identified		

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.

(9 VAC 5-80-140)

VIII. General Conditions

A. Federal Enforceability

All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.

(9 VAC 5-80-110 N)

B. Permit Expiration

This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9 VAC 5-80-80, the right of the facility to operate shall be terminated upon permit expiration.

1. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.
2. If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.
3. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.
4. If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.
5. The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.

(9 VAC 5-80-80 B, C and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)

C. Recordkeeping and Reporting

1. All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:
 - a. The date, place as defined in the permit, and time of sampling or measurements.
 - b. The date(s) analyses were performed.
 - c. The company or entity that performed the analyses.
 - b. The analytical techniques or methods used.
 - c. The results of such analyses.
 - d. The operating conditions existing at the time of sampling or measurement.

(9 VAC 5-80-110 F)

2. Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

(9 VAC 5-80-110 F)

3. The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than **March 1** and **September 1** of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:
 - a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31.
 - b. All deviations from permit requirements. For purposes of this permit, deviations include, but are not limited to:
 - i. Exceedance of emissions limitations or operational restrictions;
 - ii. Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or compliance assurance monitoring which indicates an exceedance of emission limitations or operational restrictions; or,

iii. Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

- c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that “no deviations from permit requirements occurred during this semi-annual reporting period.”

(9 VAC 5-80-110 F)

D. Annual Compliance Certification

Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than **March 1** each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

1. The time period included in the certification. The time period to be addressed is January 1 to December 31.
2. The identification of each term or condition of the permit that is the basis of the certification.
3. The compliance status.
4. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.
5. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period.
6. Such other facts as the permit may require to determine the compliance status of the source.

One copy of the annual compliance certification shall be sent to EPA at the following address:

Clean Air Act Title V Compliance Certification (3AP00)
U. S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029.
(9 VAC 5-80-110 K.5)

E. Permit Deviation Reporting

The permittee shall notify the Director, VRO Region, within four daytime business hours, after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to General Condition VIII.C.3 of this permit.

(9 VAC 5-80-110 F.2 and 9 VAC 5-80-250)

F. Failure/Malfunction Reporting

In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours after the malfunction is discovered, notify the Director, Valley Region by facsimile transmission, telephone or telegraph of such failure or malfunction and shall within 14 days of discovery provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Director, Valley Region.

1. The emission units that have continuous monitors subject to 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not subject to the 14 day written notification.
2. The emission units subject to the reporting and the procedure requirements of 9 VAC 5-40-50 C and the procedures of 9 VAC 5-50-50 C are two MWCUs (Ref. Nos. 1 and 2).
3. Each owner required to install a continuous monitoring system subject to 9 VAC 5-40-41 or 9 VAC 5-50-410 shall submit a written report of excess emissions (as defined in

the applicable emission standard) to the board for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter and shall include the following information:

- a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h) or 9 VAC 5-40-41 B 6, any conversion factors used, and the date and time of commencement and completion of each period of excess emissions;
 - b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the source. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted;
 - c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; and
 - d. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired or adjusted, such information shall be stated in the report.
4. All emission units not subject to 9 VAC 5-40-50 C and 9 VAC 5-50-50 C must make written reports within 14 days of the discovery of the malfunction.

(9 VAC 5-20-180 C, 9 VAC 5-40-50 and 9 VAC 5-50-50)

G. Severability

The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.

(9 VAC 5-80-110 G.1)

H. Duty to Comply

The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.

(9 VAC 5-80-110 G.2)

I. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(9 VAC 5-80-110 G.3)

J. Permit Modification

A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1790, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios. (9 VAC 5-80-190 and 9 VAC 5-80-260)

K. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege. (9 VAC 5-80-110 G.5)

L. Duty to Submit Information

1. The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality. (9 VAC 5-80-110 G.6)
2. Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G. (9 VAC 5-80-110 K.1)

M. Duty to Pay Permit Fees

The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-300 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-350. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by **April 15** of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department. (9 VAC 5-80-110 H and 9 VAC 5-80-340 C)

N. Fugitive Dust Emission Standards

During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

1. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;
2. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;
3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or other similar operations;
4. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,
5. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-40-90 and 9 VAC 5-50-90)

O. Startup, Shutdown, and Malfunction

At all times, including periods of startup, shutdown, soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(9 VAC 5-50-20 E and 9 VAC 5-40-20 E)

P. Alternative Operating Scenarios

Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80, Article 1. (9 VAC 5-80-110 J)

Q. Inspection and Entry Requirements

The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

1. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.
2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.
3. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.
4. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9 VAC 5-80-110 K.2)

R. Reopening For Cause

The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F.

1. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

2. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
3. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.

(9 VAC 5-80-110 L)

S. Permit Availability

Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.

(9 VAC 5-80-150 E)

T. Transfer of Permits

1. No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.
(9 VAC 5-80-160)
2. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)
3. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)

U. Malfunction as an Affirmative Defense

1. A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the requirements of paragraph 2 of this condition are met.
2. The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:

- a. A malfunction occurred and the permittee can identify the cause or causes of the malfunction.
 - b. The permitted facility was at the time being properly operated.
 - c. During the period of the malfunction the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.
 - d. The permittee notified the board of the malfunction within two working days following the time when the emission limitations were exceeded due to the malfunction. This notification shall include a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notification may be delivered either orally or in writing. The notification may be delivered by electronic mail, facsimile transmission, telephone, or any other method that allows the permittee to comply with the deadline. This notification fulfills the requirements of 9 VAC 5-80-110 F 2 b to report promptly deviations from permit requirements. This notification does not release the permittee from the malfunction reporting requirement under 9 VAC 5-20-180 C.
3. In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof.
 4. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any applicable requirement.

(9 VAC 5-80-250)

V. Permit Revocation or Termination for Cause

A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe any permit for any of the grounds for revocation or termination or for any other violations of these regulations.

(9 VAC 5-80-190 C and 9 VAC 5-80-260)

W. Duty to Supplement or Correct Application

Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.

(9 VAC 5-80-80 E)

X. Stratospheric Ozone Protection

If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.

(40 CFR Part 82, Subparts A-F)

Y. Asbestos Requirements

The permittee shall comply with the requirements of National Emissions Statements for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.150).

(9 VAC 5-60-70 and 9 VAC 5-80-110 A.1)

Z. Accidental Release Prevention

If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.

(40 CFR Part 68)

AA. Changes to Permits for Emissions Trading

No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.

(9 VAC 5-80-110 I)

BB. Emissions Trading

Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

1. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.
2. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.
3. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.

(9 VAC 5-80-110 I)